

REMARKS

By this amendment, applicants have amended the drawing Figure to show the burner (element 14) as a labeled rectangular box since its detailed illustration is not essential for a proper understanding of the invention. See, 37 CFR 1.83(a). The drawing has also been amended to provide reference numerals for the lines leading to lines 3 and 4 and to burner 14, as required by the examiner on page 4 of the office action. Applicants have also amended pages 8 and 11 of the specification to be consistent with the amended drawing figure.

Applicants have also amended claims 1 and 2 to eliminate the informalities and alleged indefiniteness problem noted by the Examiner on page 5 of the office action. The abstract has also been amended to be in proper form.

Applicants note the restriction requirement on pages 1 and 2 of the office action and affirm their provisional election to prosecute the invention of Group I, including claims 1 - 13. However, the restriction requirement is traversed for the following reasons.

It is noted that the subject application is a national stage application of International Application No. PCT/FR01/01700 and, therefore, restriction practice is governed by PCT Rule 13.1 and 37 CFR 1.499. In order to require restriction, the Examiner must show that the inventions of the identified groups do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features. In support of the restriction requirement, the Examiner has urged that the category "Y" references set forth in the search report are evidence that the "special technical" feature common to the claims of the groups does not define an unobvious distinction over the prior art. However, applicants submit the special technical feature common to

the claims of the two groups does define an unobvious distinction over the prior art, including the documents cited in the search report and the documents applied by the Examiner in rejecting the claims, for the reasons set forth hereinafter. Therefore, applicants submit the claims of Groups I and II do not lack unity of invention.

In view of the amendments to the drawing figure, reconsideration and withdrawal of the objection to the figure under 37 CFR 1.83(a) and 1.84(p)(5) are requested.

In view of the foregoing amendments to the abstract, reconsideration and withdrawal of the objection to the abstract are requested.

In view of the foregoing amendments to claims 1 and 2, reconsideration and withdrawal of the objection to claim 1 and the rejection of claim 2 under 35 USC 112, second paragraph, are requested.

Claims 1 - 9 and 13 stand rejected under 35 USC 103(a) as allegedly being unpatentable over United States Patent No. 5,730,781 to Martin et al in view of Canadian Patent No. 1,136,384 to Longo et al. Applicants traverse this rejection and request reconsideration thereof.

The rejected claims relate to a process for regeneration of a used absorbent from a desulfurization zone or from the desulfurization of any gas containing sulfur oxides. The regeneration is carried out simultaneously with filtering of the absorbent in a reducing atmosphere (e.g., in a filter reactor 12). According to the present invention, the process comprises carrying out partial combustion of a regeneration gas (e.g., fed through line 24 into burner 14) upstream from the regeneration and in that the products of the partial combustion are mixed with the used absorbent (e.g., fed through valve 11 to line 13) prior to the regeneration-filtration stage (12).

The Martin et al patent discloses a regeneration process and plant for absorbents used for processing combustion products in thermal boilers. According to Martin et al, regeneration is performed by filtering and by regenerating simultaneously the used absorbent. Two stages are carried out for the regeneration: one, which is rough stage, is performed in the presence of a regeneration gas; the other, a free stage, is performed in the presence of a fresh regeneration gas.

In the last paragraph on page 7 of the office action, the Examiner states that "[t]he difference between the applicants' claims and US Patent 5,730,781 is that the applicants' claim 1 sets forth that the regeneration gas is a product of partial combustion (conducted upstream of the regeneration-filter stage)... ." This statement is only partially correct. This is indeed one difference between the present invention and the subject matter of the Martin et al patent. However, another difference is that the products of this partial combustion are, according to the present invention, mixed with the used absorbent prior to the regeneration-filtration stage. This feature is also neither disclosed nor suggested by Martin et al.

The Canadian patent to Longo et al discloses, inter alia, a process for regenerating spent cerium oxide sorbent by contacting the spent cerium oxide sorbent with an H₂S containing reducing-regenerating gas comprising from 0.5 to 100.0 volume percent H₂S with the balance comprising a non-regenerating gas, at a temperature of from 300 to 700°C at a convenient flow rate. While this patent may teach one of ordinary skill in the art to regenerate a spent cerium oxide sorbent with an H₂S containing reducing-regenerating gas, it clearly does not disclose and would not have suggested carrying out partial combustion of the regeneration gas upstream from the regeneration and mixing the products of the partial combustion with the used absorbent prior to the regeneration-filtration stage. Thus, it would

appear the most the Canadian patent would suggest is to use an H₂S containing regeneration gas in the Martin et al regeneration process and plant. However, such a modification would not lead to the presently claimed invention.

For the foregoing reasons, it is submitted the presently claimed invention is patentable over the proposed combination of Martin et al and Longo et al.

Applicants note the indication of allowable subject matter in claims 10 - 12.

Applicants note the Examiner has also cited a number of documents as being indicative of the state of the art. However, since these documents were not applied in rejecting claims formerly in the application, further discussion of these documents is deemed unnecessary.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 612.41094X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Alan E. Schiavelli', is written over a horizontal line.

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Attachments